NOTE: This draft dated 1/22/97, prepared by GSA-FSS has not been approved and is subject to modification. DO NOT USE FOR ACQUISITION PURPOSES.

A-A-1 800
PROPOSED
SUPERSEDING
(See Section 7.6)

April 14, 1997

COMMERCIAL ITEM DESCRIPTION

VARNISH, OIL: SPAR

The General services Administration has authorized the use of this commercial item description by all federal agencies.

1. SCOPE. This commercial item description describes a clear, air-drying, exterior, phenolic-alkyd or modified alkyd varnish. It is suitable for brushing, as is, and spraying, when reduced with mineral spirits.

2. Classification. The varnish shall be of two types and two classes, as specified (see 7.2).

Type I - Gloss
Type II - Semigloss

Class 1 - VOC of 450 g/L or less
Class 2 - VOC greater than 450 g/L

3. SALIENT CHARACTERISTICS.

3.1 General requirements. The material provided shall be a one component, ready-to-use varnish. It shall be suitable for application by brush, roller, or spray.

3.1.1 Prohibited materials. The manufacturer shall ensure that no mercury, cadmium, hexavalent chromium compounds, compounds containing pyrophosphates, Hazardous Air Pollutants (HAPs), known or suspected human carcinogens, (as defined by the National Toxicology Program's Annual Report on Carcinogens), toxic pollutants, or Ozone Depleting Substances (ODS) are used in the formulation. If any of these substances are present as an impurity in a raw ingredient, its concentration shall be less than 0.1 percent by weight. The lead content of the nonvolatile portion of the coating shall not exceed 0.06 percent.

3.1.2 Condition in container. The coating shall be free from skins, livering, and seeds, and shall be readily dispersible to a uniform condition by five minutes of hand stirring. A closed, three-quarter filled container shall not skin within 48 hours, when stored at room temperature.

3.2 Special requirements Unless otherwise stated in the test method, all routine and referee testing shall be done at the conditions specified in ASTM D 3924

3.2.1 Quantitative requirements. The varnish shall meet the quantitative requirements specified in table I.

3.2.2 Dilution stability. The varnish shall show no curdling, separation, or precipitation, when thinned at a 1:1ratio with mineral spirits. Immediately upon mixing and after four hours, the resultant mixture shall be smooth and clear flowing. For referee testing, the mineral spirits shall meet the requirements of A-A-2904 Type I and the resultant mixture examined on a clean glass plate.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Paints and Chemicals Center, Engineering and Commodity Management Division (10FTE), 400 15th St. SW, Auburn, WA. 98001-6599.

FSC 8010

TABLE I

QUANTITATIVE REQUIREMENTS

PROPERTY	REQUIREMENT	ASTM TEST METHOD
Volume solids, percent, min.	57	D 2697
Prohibited materials		
Lead content, wt. percent of nonvolatile, max	0 . 0 6	See note 4/
Other prohibited materials listed in 3.1.2, wt. percent	0.1	See note 4/
Rosin content	Negative	D 1542
Volatile Organic Compound (VOC) content, Class I, g/L	≤450	D 3960 2/
Flash point, °C (°F), min.	38 (100)	D 56
Drying time, h, max.		
Set to touch	2-1/2	D 1640 1/
Dry to recoat	12	D 1640 1/
Color, not darker than	I4	D 156
Gloss		
Type I - Gloss	≥80	D 523 1/
Type II - Satin	35-55	D 523 1/
Viscosity, s	30-55	D 1200 #4 Cup
Adhesion	5B	D 3359 I_/, 3/
Toughness, percent addition of reagent	120	D 1642 Method A
Resistance to:		
72 h immersion in Water	See note 6/	D 1308 1/
1/4 h immersion in Boiling water	See note 6/	D 1308 1/
7 h immersion in Alcohol, 50 % with water	See note 6/	D 1308 1/
7 h immersion in Alkali, 5 % NaOH	See note 6/	D 1308 1/
4 h immersion in Hydrocarbon solvents	See note 6/	D 1308 1/
4 h immersion in Gasoline	See note 6/	D 1308 1/ 7/
Package stability of primer		
Viscosity after storage, s	30-71	D 1849 and D 562
Rigidity after storage, max	IO	D 1849 and D 869

1/ The varnish shall be applied to four mahogany panels prepared in accordance with ASTM D 358. The total dry film thickness (dft) shall be 25 µm ± 4µm (0.001 inch ± 0.0002 inch). Allow to air dry at room temperature for 24 hours. For the adhesion test only, the test panels shall be prepared from 3 steel panels meeting the requirements of ASTM D 609 Type 3, procedure D. The dft shall be 25 µm ± 4µm (0.001 inch ± 0.0002 inch). Allow the steel panels to cure for five days at standard conditions before performing the adhesion test.

2/ The VOC shall be determined on the varnish as applied in accordance with the manufacturer's instructions for use.

3/ Use test method B. Use Scotch Brand Tape number 810 or any other cellophane tape with the same adhesive strength.

4/ For referee purposes only. Lead content shall be measured using X-Ray fluorescence, cadmium content by ASTM D 3335, chromium content by ASTM D 3718, and mercury content by ASTM D 3624. Organic solvents shall be identified using FED-STD-141 methods 7356 and 7375.

5/ Use method B. The test panels used shall be in accordance with FED-STD-141 method 2012. The dry film thickness shall be 25 µm ± 2µm (1 mil ± 0.1 mils). The coating shall air dry for 24 hours at room temperature. After air drying, heat the panels at 105 °C ± 2 °C (221 °F ± 4 °F) for three hours, and cool 1/2 hour at room temperature. Then, bend the panels as specified in D 522. The time for the panel bending shall be one to two seconds.

6/ Three hours after removal from the test solution, there shall be no blistering, softening, swelling, discoloration, loss of adhesion, or change in gloss or appearance of the varnish.

7/ For referee testing, the reagent gasoline used shall be iso-octane (2,2,4 trimethylpentane) meeting the requirements of the National Institute of Standards and Technology "Primary Reference Fuel."

3.2.3 Self lifting. A second coat of varnish shall be applied to the panels prepared in note 1/. There shall no lifting or any film irregularities during application and after drying of the second coat.

3.2.4 Adhesion to metal primers. Apply a medium spray coat of primer to a 12.7 cm by 40.6 cm (5 in to 16 in), or larger, solvent cleaned steel panel. Allow the primer to fully cure. Brush a coat of the varnish over the primer and allow to air-dry for 24 hours. Make a diagonal cut through the coating with a knife or razor blade. There shall be no separation of the varnish from the primer. For referee purposes, the steel panel shall be cleaned as specified in FED-STD-141 method 2011 and the primer shall meet the requirements of TT-P-664. Air-dry the primed panel for 1/2 hour then bake at 105 °C ± 2 °C (221 °F ± 4 °F) for 24 hours and cool to room temperature, prior to applying the varnish. The dft of the varnish shall be 25 µm ± 2µm (1 mil ± 0.1 mils). The knife cut shall be made in accordance with FED-STD-141 method 6304.

3.2.5 Odor. When tested in accordance with ASTM D 1296, the odor of the varnish shall not be pungent and be similar to that of mineral spirits.

4. REGULATORY REQUIREMENTS.

4.1 Federal Acquisition Regulations (FAR). The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the FAR.

4.2 Code of Federal Regulations (CFR). The varnish shall not contain any substance listed in the following Code of Federal Regulations as a hazardous air pollutant, toxic pollutants, or ozone depleting substance:

a. 40 CFR part 61.
b. 40 CFR part 401
c. 40 CFR part 82

4.3 MSDS. The manufacturer shall comply with requirements set forth by the Hazardous Communication Standard 29 CFR 1910.1200 (d) through (g). All Material Safety Data Sheets (MSDSs) submitted shall comply with provisions of FED-STD-313.

5. QUALITY ASSURANCE PROVISIONS.

5.1 Contractor quality assurance. The contractor shall maintain substantiating evidence that the product offered meets the salient characteristics of this Commercial Item Description and that the product conforms to the producer's own drawing, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial marketplace.

The contractor shall provide the required information in a tabulated format and with enough clarity so that the formulation of the tested product can be traced compared to the offered product(s). The contractor shall also provide a summary of performance data, consisting of test reports, substantiating that the product to be supplied under this CID meets the ASTM documents cited under 3.2 through 3.2.5, and is the same product offered for sale in the commercial marketplace.

The government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

6. PACKAGING.

Preservation, Packing and marking shall be as specified in the contract or order.

7. NOTES.

7.1 Intended use. The varnish covered by this commercial item description is intended for exterior use, primarily as a transparent protective finish for wood. It also serves as an undercoat for enamels, when used on wood construction, and can be used for refinishing old varnished or painted surfaces. It is not intended for use where rubbing properties are a prerequisite. For this purpose, use A-A-1 546, Varnish, Oil.

7.2 Ordering Data. Purchasers should include the following information in the contract or purchase order.

(a) Title, number, and date of this commercial item description.
(b) Type and class required.
(c) Quantity and size of the container required.
(d) Address to whom MSDSs should be sent.
(e) Packaging, packing, and marking required.

7.3 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.

AA1 800-I1P

SIZE **P = PINT**
Q = QUART
G = GALLON
C = FIVE GALLON CAN

CLASS (1 = CLASS 1, 2 = CLASS 2)

TYPE (I = TYPE I, II = TYPE II)

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7.4 **Referenced documents.**

Federal specification and Standards:

A-A-l 546 - Varnish, Oil.
FED-STD-141 - Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling Testing.
FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials furnished to Government Activities.

ASTM **Standards:**

D 56 - Flash point by Tag Closed Tester.
D 1 5 6 - Soybolt Color of Petroleum Products (Soybolt Chromometer Method).
D 522 - Mandrel Bend Test of Attached Organic Coatings.
D 523 - Specular Gloss.
D 358 - Specification for **Wood to** Be Used as Panels in Weathering Tests of Coatings.
D 869 - Evaluating Degree of Settling of Paint.
D 1200 - Viscosity by Ford Viscosity Cup.
D 1296 - Odor of Volatile Solvents and Diluents.
D1308 - Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
01542 - Qualitative Detection of Rosin in Varnishes.
D 1640 - Drying, Curing, or Film Formation of Organic Coatings at Room Temperature.
D 1642 - Elasticity or Toughness of Varnishes.
D1849 - Package Stability of Paint.
D 2697 - Volume Nonvolatile Matter in Clear or Pigmented Coatings.
D 3335 - Low Concentrations of Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy.
D 3624 - Low Concentrations of Mercury in Paint by Atomic Absorption Spectroscopy.
D3718 - Low Concentrations of Chromium in Paint by Atomic Absorption Spectroscopy.
D 3924 - Standard Environment for Conditioning and Testing Paint, Varnish, Lacquer, and Related Materials.
D 3359 - Measuring Adhesion by Tape Test.
D 3960 - Determining Volatile Organic Compound (VOC) Content of Paints and Related

Coatings.

7.5 Source of Documents.

7.5.1 Contact the contracting officer for a copy of paragraph 23.403 of the FAR, and the appropriate paragraphs in 29 and 40 CFR.

7.5.2 Copies of ASTM specifications and standards may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.5.3 Copies of Federal Specifications and standards may be obtained from the Federal Supply Service Bureau, Specification Section, Suite 8100, 470 East L'Enfant Plaza, SW, Washington, DC 20407.

7.5.4 Sources for the National Institute of Standards and Technology "Primary Reference Fuel." Iso-octane can be purchase from:

Rohm and Haas Company, 222 W. Washington Square, Philadelphia, PA.
Phillip Petroleum Company, Special Products Division, Bartleville, OK.
En-Jay Company, 15 West 51st St., New York, NY

7.6 Supersession data. This Commercial Item Description supersedes Federal Specification TT-V-119D, dated July 6, 1973, and TT-V-121H, dated January 5, 1978.

MILITARY INTERESTS:

Custodian
Army - ME
Air Force - 99

Review Activities
Army - ME
Air Force - 84
Navy - OS

User Activities
Army - ME
Navy - OS, YD

CIVIL AGENCY
COORDINATING ACTIVITY:

COM - NIST
DOT - APM
GSA - FSS
GSA - PCT
HHS - NIH
INT - BOR
INT - BPA
VA - oss